WHAT IS CLAIMED IS:

- 1. A semiconductor device, comprising:
- a semiconductor substrate;
- a gate insulation film formed on said semiconductor substrate; and
- a gate electrode formed on said gate insulation film,

said gate electrode comprising:

- a first polycrystalline silicon film formed on said gate insulation film; and
- a second polycrystalline silicon film formed above said first polycrystalline silicon film, said second polycrystalline silicon film being in a different crystal state from said first polycrystalline silicon film, and at least an upper layer thereof being silicidized.
- 2. The semiconductor device according to claim 1, further comprising:
- a separation layer, provided between said first polycrystalline silicon film and said second polycrystalline silicon film, for intercepting silicidization of said first polycrystalline silicon film.
- 3. The semiconductor device according to claim 1, wherein said different crystal state denotes varying said second polycrystalline silicon film from said first polycrystalline silicon film in crystal face orientation.

- 4. The semiconductor device according to claim 2, wherein said different crystal state denotes varying said second polycrystalline silicon film from said first polycrystalline silicon film in crystal face orientation.
- 5. The semiconductor device according to claim 3, wherein a proportion of a silicon crystal face orientation (111) of said second polycrystalline silicon film is greater than that of said first polycrystalline silicon film.
- 6. The semiconductor device according to claim 4, wherein a proportion of a silicon crystal face orientation (111) of said second polycrystalline silicon film is greater than that of said first polycrystalline silicon film.
- 7. The semiconductor device according to claim 1, wherein said different crystal state denotes varying said second polycrystalline silicon film from said first polycrystalline silicon film in crystal particle diameter.
- 8. The semiconductor device according to claim 2, wherein said different crystal state denotes varying said second polycrystalline silicon film from said first polycrystalline silicon film in crystal particle diameter.
- 9. The semiconductor device according to claim 7, wherein a crystal particle diameter of said second

polycrystalline silicon film is smaller than that of said first polycrystalline silicon film.

- 10. The semiconductor device according to claim 8, wherein a crystal particle diameter of said second polycrystalline silicon film is smaller than that of said first polycrystalline silicon film.
- 11. The semiconductor device according to claim 1, wherein any one of a cobalt silicide layer, a titanium silicide layer, a nickel silicide layer, and a platinum silicide layer is formed in said second polycrystalline silicon film by said silicidization.
- 12. The semiconductor device according to claim 2, wherein any one of a cobalt silicide layer, a titanium silicide layer, a nickel silicide layer, and a platinum silicide layer is formed in said second polycrystalline silicon film by said silicidization.
- 13. A method for manufacturing a semiconductor device, comprising:
- a first step of forming a first polycrystalline silicon film above a semiconductor substrate with a gate insulation film intervening therebetween;
- a second step of forming above said first polycrystalline silicon film a second polycrystalline silicon film different in crystal state from said first polycrystalline silicon film; and
- a third step of silicidizing at least an upper portion of said second polycrystalline silicon film to form a gate electrode comprising said first

polycrystalline silicon film and said silicidized second polycrystalline silicon film.

14. The method for manufacturing a semiconductor device according to claim 13, further comprising:

after said first step and before said second step, a step of forming on said first polycrystalline silicon film a separation layer for intercepting silicidization of said first polycrystalline silicon film.

- 15. The method for manufacturing a semiconductor device according to claim 13, wherein said different crystal state denotes varying said second polycrystalline silicon film from said first polycrystalline silicon film in crystal face orientation.
- 16. The method for manufacturing a semiconductor device according to claim 14, wherein said different crystal state denotes varying said second polycrystalline silicon film from said first polycrystalline silicon film in crystal face orientation.
- 17. The method for manufacturing a semiconductor device according to claim 15, wherein a proportion of a silicon crystal face orientation (111) of said second polycrystalline silicon film is made greater than that of said first polycrystalline silicon film.
- 18. The method for manufacturing a semiconductor device according to claim 16, wherein a proportion of

a silicon crystal face orientation (111) of said second polycrystalline silicon film is made greater than that of said first polycrystalline silicon film.

- 19. The method for manufacturing a semiconductor device according to claim 13, wherein said different crystal state denotes varying said second polycrystalline silicon film from said first polycrystalline silicon film in crystal particle diameter.
- 20. The method for manufacturing a semiconductor device according to claim 14, wherein said different crystal state denotes varying said second polycrystalline silicon film from said first polycrystalline silicon film in crystal particle diameter.
- 21. The method for manufacturing a semiconductor device according to claim 19, wherein a crystal particle diameter of said second polycrystalline silicon film is made smaller than that of said first polycrystalline silicon film.
- 22. The method for manufacturing a semiconductor device according to claim 20, wherein a crystal particle diameter of said second polycrystalline silicon film is made smaller than that of said first polycrystalline silicon film.
- 23. The method for manufacturing a semiconductor device according to claim 13, wherein said second step forms said second polycrystalline silicon film

by depositing an amorphous silicon film and thereafter applying a heat treatment to said amorphous silicon film to crystallize said amorphous silicon film.

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- 24. The method for manufacturing a semiconductor device according to claim 14, wherein said second step forms said second polycrystalline silicon film by depositing an amorphous silicon film and thereafter applying a heat treatment to said amorphous silicon film to crystallize said amorphous silicon film.
- 25. The method for manufacturing a semiconductor device according to claim 13, wherein said silicidization is controlled by a film thickness of said second polycrystalline silicon film.
- 26. The method for manufacturing a semiconductor device according to claim 14, wherein said silicidization is controlled by a film thickness of said second polycrystalline silicon film.
- 27. The method for manufacturing a semiconductor device according to claim 13, wherein any one of a cobalt silicide layer, a titanium silicide layer, a nickel silicide layer, and a platinum silicide layer is formed in said second polycrystalline silicon film by said silicidization.
- 28. The method for manufacturing a semiconductor device according to claim 14, wherein any one of a cobalt silicide layer, a titanium silicide layer, a

nickel silicide layer, and a platinum silicide layer is formed in said second polycrystalline silicon film by said silicidization.